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MOSS & BARNETT

A Professional Association

GLEN E. SCHUMANN
612.347.0282
SchumannG@moss-barnett.com

4800 Wells Fargo Center
90 South Seventh Street
Minneapolis, MN 55402-4129
Telephone 612.347.0300
Facsimile 612.339.6686
www.moss-barnett.com

HERMAN J. RATELLE
THOMAS A. KELLER III
JAMES E. O'BRIEN
EDWARD L. WINER
WILLIAM A. HAUG
CHARLES A. PARSONS, JR.
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ANTHONY A. DORLAND
SHAREEN R. LUZE

OF COUNSEL
ARTHUR J. GLASSMAN

December 13, 2002

Hon. Commissioner of Patents and Trademarks
United States Patent and Trademark Office
Washington, D.C. 20231

Re: Application No. 09/887,528
        Our File No.: 41822.2

Dear Madam or Sir:

Enclosed please find an Information Disclosure Statement executed on behalf of Michael A. Ekhaus, an alleged co-inventor under the terms of the pending application. This Information Disclosure Statement is submitted in furtherance of that certain Decision Dismissing Petition Under 37 CFR 1.47(a) dated September 3, 2002, in regards to the matter identified above. Mr. Ekhaus is represented by our office.

In furtherance of his obligation under U.S. Patent law and regulations, Mr. Ekhaus submits the enclosed Information Disclosure Statement.

By a copy of this letter and enclosure, the applicant's counsel is being advised of this filing.

Sincerely,

Glen E. Schumann

GES/kmm
Enclosure
554539
cc: Mr. Jim Boyle
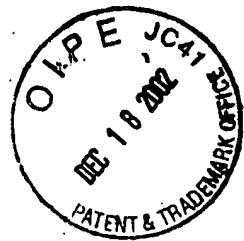
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Michael A. Ekhaus	)
		)
SERIAL NO.:	09/887,528	)
		)
FILED :	June 25, 2001	)
		)
FOR :	Method and System for High	)
	Performance Model-Based Personalization	)
		)
Docket No :	7744.0061	)

INFORMATION DISCLOSURE STATEMENT

Hon. Commissioner of Patents and Trademarks
United States Patent and Trademark Office
Washington, D.C. 20231

Dear Sir:

This Information Disclosure Statement is provided in response to the Decision Dismissing Petition Under 37 CFR 1.47 (a) as Inappropriate and Notice to File Missing Parts of Non-Provisional Application, in the above-identified matter, filed March 18, 2002. This submission constitutes the prior art disclosure of Michael A. Ekhaus in connection with the aforementioned pending application.

A copy is being provided to applicant's counsel, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, 1300 I Street NW, Washington, D.C. 20005.

Respectfully submitted,

Michael A. Ekhaus

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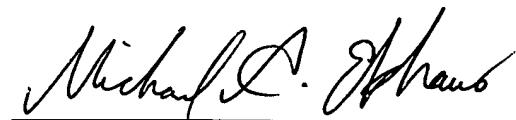
1   Introduction

The following document contains what I, Michael A. Ekhaus, believe to be prior art pertaining to the patent application that was filed on June 25, 2001 as United States Application Serial No. 09/887,528 entitled:

"Method and System for High Performance Model-Based Personalization".

A provisional application Serial No. 60/213,528 associated with this work and application was filed June 23, 2000.

2   Specific Prior Art

Details of Professor George Karypis' work on the SUGGEST recommendation system at The University of Minnesota was known to me before the completion of the specification and the filing of the provisional application associated to application 09/887528.

Professor Karypis' work accomplishes the same utility as the system described by the specification within this patent application and is based on the same observations about using co-occurrence between "pairs of items". An executable version of Professor Karypis' system was tested against the actual system embodied by the specification for which a patent is sought. The two systems performed nearly identically. The comparison between the two systems occurred at the place of business of the company that is pursuing this application and occurred prior to the submission of the associated provisional application. In any case, detailed knowledge of Professor Karypis' work was made known to me before the submission of the provisional application in question.

I feel that Professor Karypis' work on item-based recommendation systems is prior art

to this specification and application. Since the two systems are functionality equivalent and I had prior knowledge of Karypis' work, I can not declare that I am first and the original source of the ideas specified within the above mention application.

More information about Professor Karypis' work is available from his web site.

- Description of Professor Karypis works is available at

  http://www-users.cs.umn.edu/ karypis/publications/Papers/PDF/itemrs.pdf

- A software download is available at:

  http://www-users.cs.umn.edu/ karypis/suggest/index.html

3   General Prior Art

3.1   Pair-wise Product Associations

The work within the specification associated to patent application (09/887,528), "Method and System for High Performance Model-Based Personalization" is completely based on the calculation of the matrices $R^t R$ or RR^t, where the matrix R represents the data that the system is calculating. When R is a matrix of 0's and 1's, these matrix products compute the cardinality of pairwise co-occurrences of the column indices or row indices, respectively. This is discussed in **"A Course in Combinatorics" by J.H. van Lint and R.M.Wilson**.

The use of the pairwise co-occurrence in analyzing transaction data is very well established, even within the relatively new industry of analyzing e-commerce transactions. A good example of this is described in the following Hewlett-Packard technical report:

"Visualization of Directed Association in E-commerce Transaction Data".

This report is available on the web at

http://www.hpl.hp.com/techreports/2000/HPL-2000-160.html .

This report discusses the use of association matrices in analyzing transaction data and explicitly draws the readers attention to the use in making product recommendations.

3.2   Latent Semantic Indexing

The literature on Latent Semantic Indexing is far to extensive to enumerate here, but does constitute prior art. In particular, some of these connections are summarized within the following textbook:

"Matrix Analysis and Applied Linear Algebra" by Carl D. Meyer.   (ISBN 0-89871-454-0)

See Example 5.12.4, in which latent semantic indexing is discussed within the context of Internet Search Engines. This text also establishes that a query against a "model" is expressible as a linear algebra expression. The specification in question repeatedly makes use of this idea. Furthermore, internet search engines are recommendation systems and the use of Linear Algebra is well established within this context and within Meyer's textbook.